

ABSTRACT OF THE DISCLOSURE

To simplify wire harness including power cables and reduce power loss in an engine-motor hybrid vehicle drive train system.

Some wheels are driven by an engine. Wheels other than the
5 wheels driven by the engine are driven by a motorized machine .
When the running load is large, for example, in starting a vehicle
or running it on a climbing lane, the motorized machine is
activated as a motor for driving wheels in order to assist the
engine drive system. While a vehicle runs, there is a range
10 in which no motor assistance is needed (for example, in low
to medium load running or deceleration). While no motor
assistance is needed, the motorized machine functions as a
generator to convert mechanical energy from the wheels into
electric energy. The motorized machine , inverter , capacitor
15 device and controller are integrated into a unit and the unit
is attached to a differential gear .